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**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q68919

SUSUMU KAYAMA , et al.

Appln. No.: 10/506,547

Group Art Unit: 1773

Confirmation No.: 1319

Examiner: Not Yet Assigned

Filed: September 3, 2004

For: ULTRAFINE PARTICULATE TITANIUM OXIDE WITH LOW CHLORINE AND  
LOW RUTILE CONTENTS, AND PRODUCTION PROCESS THEREOF

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith, except for the following: U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant submits the following explanations:

- 1) “Hikari Kuriin Kakumei”- A concise explanation can be found at page 2 of the specification.
- 2) “Sanka Chitan Hikari”- A concise explanation can be found at page 2 of the specification.
- 3) JP-10-255863- A concise explanation can be found at page 3 of the specification.
- 4) JP-2000-340269-A concise explanation can be found at the bottom of page 3 of the specification.
- 5) “Titanium Oxide”-A concise explanation can be found at the bottom of page 3 to the top of page 4 of the specification.
- 6) “Ultrafine Particle Handbook”-A concise explanation can be found at page 5 of the specification.
- 7) JP-6-340423-A concise explanation can be found at page 5 of the specification.
- 8) JP 7-316536-A concise explanation can be found at page 5 of the specification.
- 9) JP-3-252315-A concise explanation can be found at page 5 of the specification.
- 10) JP-10-251021-A concise explanation can be found at page 5 of the specification.

Applicants further note that the English-language “Nature” article is discussed at the bottom of page 2 to the top of page 3 of the specification.

In addition, Applicant encloses English-language Patent Abstracts of Japan for each of the six listed JP patent documents.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

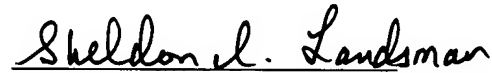
Respectfully submitted,

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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

  
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Substitute for Form 1449 A &amp; B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

*Complete if Known*

Application Number	10/506,547
Confirmation Number	1319
Filing Date	September 03, 2004
First Named Inventor	SUSUMU KAYAMA
Art Unit	1773
Examiner Name	Not Yet Assigned
Attorney Docket Number	Q68919

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**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>3</sup> (if known)		
		US			
		US			
		US			
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		US			
		US			
		US			
		US			
		US			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	10-255863	A	9/25/1998		Abstract
		JP	2000-340269	A	12/8/2000		Abstract
		JP	6-340423-A	A	12/13/1994		Abstract
		JP	7-316536	A	12/5/1995		Abstract
		JP	3-252315	A	11/11/1991		Abstract
		JP	10-251021	A	9/22/1998		Abstract

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		A. FUJISHIMA, et al. "Hikari Kuriin Kakumei", CMC Publishing Co., Ltd. pp 143-145, 1997	
		K. HASHIMOTO, et al., "Sanka Chitan Hikari shokubai no subete", CMC Publishing Co., pp. 29-31, 1998	
		M. GRAEZEL, "A low-cost, high efficiency solar cell based on dye-sensitized colloidal TiO <sub>2</sub> films", Nature, vol. 353, pp. 737-740, 1991	
		M. SEINO, "Titanium Oxide", Gihodo Co., p. 129, 1991	
		S. SAITO, "Ultrafine Particle Handbook", Fujitec Corporation p. 388, 1990	

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.